CLAIMS

1. An X-ray imaging apparatus comprising X-ray production means arranged to produce X-rays from a plurality of source positions spaced around an object location and spaced from each other by a source spacing, a plurality of X-ray sensors arranged to be spaced around the object position so as to detect X-rays emitted from the source positions and passing through the object position, and control means arranged to control the order in which the source positions are active such that the average smallest displacement between an active source position in one emission period and an active source position in the subsequent period is greater than the source spacing.

2. Apparatus according to claim 1 wherein said average smallest displacement is at least twice the source spacing.

3. Apparatus according to claim 1 or claim 2 wherein the control means is arranged such that no active source position in any one emission period is adjacent a source position active in the next emission period.

4. Apparatus according to any foregoing claim wherein the control means is arranged so that in each emission period only one source position is active.

5. Apparatus according to any of claims 1 to 3 wherein the control means is arrange such that in each emission period a plurality of source positions are active simultaneously.

6. Apparatus according to claim 5 wherein each of the source positions is arranged to produce X-rays which will be detected by a corresponding group of sensors, and the control means is arranged such that in each emission period, the there is no overlap between the groups of sensors for said plurality of source positions.

7. Apparatus according to claim 5 or claim 6 wherein in each emission period at least half of the sensors are arranged to receive X-rays from the active source positions.

8. Apparatus according to claim 7 wherein in each emission period substantially all of the sensors are arranged to receive X-rays from the active source positions.

9. Apparatus according to any foregoing claim comprising a plurality of X-ray tubes each providing a plurality of said source positions.

10. Apparatus according to claim 9 wherein the control means is arranged such that in each emission period the active source position is in a different tube from the active source position in the previous emission period.

11. Apparatus according to claim 10 wherein only one source position is active in each emission period and the active source positions are provided in each of the tubes in turn.

12. Apparatus according to any of claims 9 to 11 wherein, within each tube, the order in which the source positions are active is arranged such that in each emission period the active source position is non-adjacent to the source position active in the previous emission period.

13. An X-ray imaging apparatus substantially as hereinbefore described with reference to Figures 1 and 2, Figure 3 or Figure 4 of the accompanying drawings